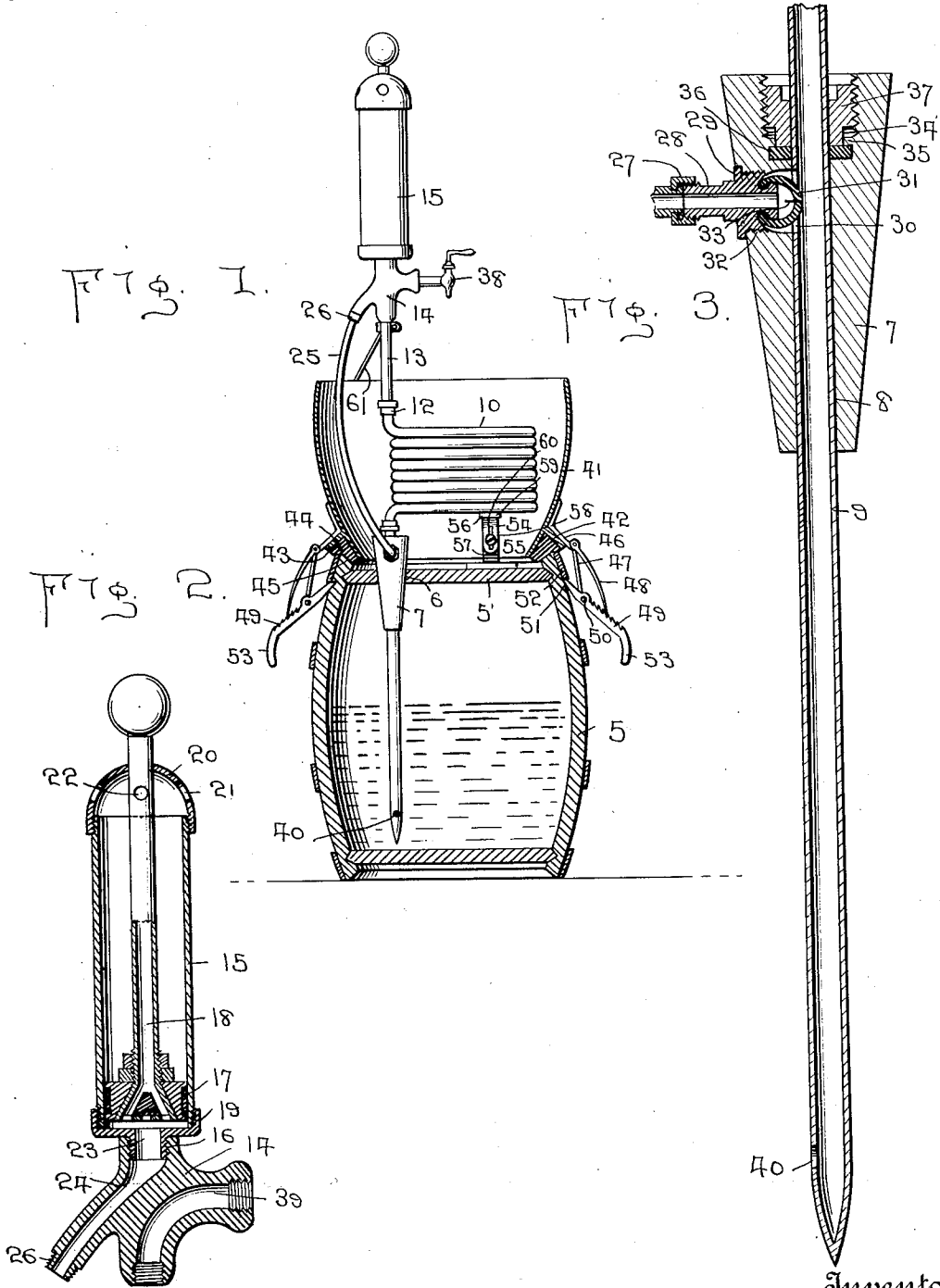


A. DADE.  
 COOLER FOR LIQUID DISPENSING APPARATUS.  
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# UNITED STATES PATENT OFFICE.

ALBERT DADE, OF FRANKFORT, NEW YORK.

COOLER FOR LIQUID-DISPENSING APPARATUS.

1,065,666.

Specification of Letters Patent.

Patented June 24, 1913.

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*To all whom it may concern:*

Be it known that I, ALBERT DADE, a citizen of the United States, residing at Frankfort, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Coolers for Liquid-Dispensing Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to liquid dispensing apparatus, and it more particularly relates to apparatus for dispensing beverages.

15 An object of the invention is to provide an improved cooler for beverage dispensing apparatus adapted to be secured onto a beer keg or barrel for drawing beer therefrom.

20 A still further object of the invention is to provide a device of this character which may be quickly and easily "knocked down" and "set up", and thereby made especially adaptable for dispensing beverages at picnics and the like.

25 Other objects and advantages may be recited hereinafter and in the claims.

In the accompanying drawings, which form a part of this application, Figure 1 is a vertical sectional view through a beer keg and through an ice receiver, and having my improved beer pump applied thereto. Fig. 2 is a vertical sectional view through the force pump element and through a two-way connection associated therewith, and, 30 Fig. 3 is a vertical sectional view through the primary liquid duct and its adjuncts.

Referring to these drawings, in which similar reference characters correspond with similar parts throughout the several views, 40 the numeral 5 designates a keg which is partly filled with liquid and having a bung hole 6 in its top. A downwardly tapered plug 7, provided with a vertical aperture 8, is seated in the bung hole. A vertical pipe 9, which will hereinafter be known as the primary liquid duct, extends through the aperture 8, having its lower end adjacent to the bottom of the keg and its upper end secured to a pipe coil 10, through the medium of a pipe union 11, a similar union 12 connecting the coil to a pipe section 13, which will hereinafter be known as the exit pipe; said exit pipe being removably secured to a two-way connection 14. An air pressure 50 pump 15 is screw threaded at 16 and thereby adapted to be quickly and easily connected

and disconnected with the member 14. The pump 15 may be of any ordinary and proper construction, but the construction shown comprises the main cylinder of the pump 15, 60 a piston 17, a hollow plunger 18, passing through and secured to the piston, a base member 19 and an apertured cap 20, the apertures 21 thereof being adapted to allow free access of air into the pump, an aperture 22 being provided in the hollow plunger for 65 allowing the passage of air through the plunger, and hence through the pump. The base 19 is centrally apertured at 23, and this aperture is in communication with an 70 air pipe 24, which communicates with an air pipe 25, the latter being removably secured at 26 to a member 14.

The lower end of the pipe 25 is connected by a union 27 to a nipple 28, the latter being 75 connected at 29 to the plug 7 and communicating with the primary liquid duct 9, through an opening 30 in said liquid duct and through a valve member 31. This valve member is of rubber and is seated in a peripheral groove 32 adjacent to an end of the nipple 28, said valve member extending over 80 and beyond said end of the nipple and into the opening 30. The valve member has a substantially hemispherical portion provided with a slit 33 which is normally closed. 85 The plug 7 is provided with a screw-threaded aperture 34 having an annular shoulder 35 near its bottom, and having a rubber retaining-ring 36 fitted under the shoulder, and thereby prevented from accidental dis- 90 lodgment. A screw-threaded plug 37 is fitted within the aperture 34 and bears upon the retaining ring, so as to spread the same and cause it to clamp the duct 9, for hold- 95 ing it in adjusted position. A faucet 38 communicates with the member 14, the opening of said faucet communicating with a liquid passage 39, the latter communicating with the pump pipe 13. The duct 9 is pro- 100 vided with an opening 40 near its lower end, so that air from the pump 15 may be forced through the passage 24, pipe 25, nipple 28, valve member 31 and duct 9, said air entering the keg through the opening 40, 105 and rising through the liquid to the surface thereof and exerting a pressure thereon, the faucet 38 being closed. When the faucet is open, after sufficient pressure has been obtained, on the liquid, the latter is thereby 110 forced through the aperture 40 and up through the duct 9 whence it passes through

the coil 10, exit pipe 13, passage 39 and faucet 38. However, if the faucet is closed, the pressure is maintained upon the liquid, so that the latter will be forced through the faucet as soon as it is open.

The valve 31 operates to prevent air from returning upward through the pipe 25, but allows beer to pass therethrough into the pipe 9 through the slit 33 which is opened by the pressure of air from the nipple 28, but the pressure of air or liquid on the exterior surface of the valve member 31 operates to close the slit 33 more tightly. It will be seen that by unscrewing the nipple 28, the valve 31 may be easily replaced by another, when necessary, and it will further be seen that when the plug 37 is loosened, the retaining-ring 36 relaxes its grip on the duct 9, so that the latter may be removed from or adjusted in the plug 7. In practice, the plug 7 will first be driven, by a mallet or the like, into the bung hole and the duct 9 and nipple 28 are preferably secured in place after the plug 7 is seated. The other elements of the pump construction may thereafter be secured in place, as shown.

In order that I may provide for cooling the liquid while being pumped, I inclose the pipe coil 10 within an ice receiver 41, which is in the shape of a bottomless bowl, and has a downwardly and outwardly extending peripheral flange 42 a short distance from its lower edge, thereby providing an annular groove 43 between said lower edge and peripheral flange 42. An annular packing ring 44, preferably of rubber, is seated in the groove 43, and is adapted to fit snugly upon the chine 45 of the keg 5. A bracket 46 is secured to the receiver 41, and has the link 47 pivoted thereto, a pawl 48 being also pivoted to the bracket 46. A toothed lever 49 is pivoted to the link 47, at 50 and has the end 51 pointed and adapted to engage under the top hoop 52 of the keg. The lever 49 is also provided with a handle 53; and it is obvious that by placing the ends 51 under the hoop 52 and bearing downward on the handle 53, the packing ring 44 will be drawn down tightly on said chine so as to make a water-tight joint. The pawls 48, being in engagement with the teeth of the lever 49, hold said lever into adjusted position, as shown. The receiver 41 may now be filled with ice, the same being packed in and around the coil 10, for cooling the liquid as it flows through the coil. It is seen that

the ice will rest directly on the head 5' of the keg, and thereby absorb a considerable amount of heat from the keg and its contents.

In order that the coil 10 may be properly supported within the receiver, I provide an adjustable support 54 having a base 55 resting upon the head 5' and having the cross bar 56 extending under the coil 10 and supporting the same, a standard 57 extends upward from the base 55, while a slotted arm 58 depends from the cross bar 56, and a screw or bolt 59 extends through the slot 60 and is threaded into the standard 57, and thereby adapted to secure the coil-support into adjusted position.

The pumping mechanism may be rendered more rigid by means of the prop 61 which may be secured to the pump mechanism and to the receiver 41, by any proper means.

It will be seen that I have provided a device of this character which is fully capable of attaining the foregoing objects and in a thoroughly practical and efficient manner.

I do not limit my invention to the exact details of construction, combination and arrangement of parts as herewith illustrated and described, but my invention may only be limited by a reasonable interpretation of the claims.

I claim:—

1. In a liquid cooling apparatus, the combination with a hoop-bound liquid container having a head, of a bottomless ice receiver seated upon the container and having means associated therewith for engaging one of the hoops and clamping it tightly to the receiver for making a liquid-tight joint, between said container and receiver.

2. In a liquid cooler, the combination with a liquid container having a head and having a chine surrounding the head of a bottomless ice receiver having an annular groove and having a packing ring fitted in the annular groove and adapted to be fitted upon the chine, and means for tightening the receiver upon the container, so as to make a water-tight joint between said packing and said chine.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT DADE.

Witnesses:

F. D. WANT,  
JOHN BAPTESTE HINGRE.